

TABLE I-1—FILTER LENSES FOR PROTECTION AGAINST RADIANT ENERGY—Continued

Operations	Electrode size 1/32 in.	Arc current	Minimum protective shade
Air carbon	(Light)	Less than	10
Arc cutting	(Heavy)	500	11
		500-1000	
Plasma arc welding		Less than	6
		20	8
		20 -	10
		100	11
		100 -	
		400	
		400 -	
		800	
Plasma arc cutting	(light)**	Less than 300	8
	(medium)**	300-400	9
	(heavy)**	400-800	10
Torch brazing			3
Torch soldering			2
Carbon Arc welding			14

** These values apply where the actual arc is clearly seen. Lighter filters may be used when the arc is hidden by the workpiece.

FILTER LENSES FOR PROTECTION AGAINST RADIANT ENERGY

Operations	Plate thickness—inches	Plate thickness—mm	Minimum* protective shade
Gas welding:			
Light	Under 1/8	Under 3.2	4
Medium	1/8 to 1/2	3.2 to 12.7	5
Heavy	Over 1/2	Over 12.7	6
Oxygen cutting			
Light	Under 1	Under 25	3
Medium	1 to 6	25 to 150	4
Heavy	Over 6	Over 150	5

* As a rule of thumb, start with a shade that is too dark to see the weld zone. Then go to a lighter shade which gives sufficient view of the weld zone without going below the minimum. In oxyfuel gas welding or cutting where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line in the visible light of the (spectrum) operation.

(b) *Criteria for protective eye and face devices.* (1) Protective eye and face devices purchased after May 20, 1982, shall comply with the American National Standards Institute, ANSI Z87.1-1989, "Practice for Occupational and Educational Eye and Face Protection," which is incorporated by reference as specified in §1915.5, or shall be demonstrated by the employer to be equally effective.

(2) Eye and face protective devices purchased before May 20, 1982, shall comply with "American National Standard Practice for Occupational and Educational Eye and Face Protection, Z87.1-1979," which is incorporated by reference as specified in §1915.5, or shall be demonstrated by the employer to be equally effective.

§ 1915.154 Respiratory protection.

Respiratory protection for shipyard employment is covered by 29 CFR 1910.134.

§ 1915.155 Head protection.

(a) *Use.* (1) The employer shall ensure that each affected employee wears a protective helmet when working in areas where there is a potential for injury to the head from falling objects.

(2) The employer shall ensure that each affected employee wears a protective helmet designed to reduce electrical shock hazards where there is potential for electric shock or burns due to contact with exposed electrical conductors which could contact the head.

(b) *Criteria for protective helmets.* (1) Protective helmets purchased after August 22, 1996, shall comply with ANSI